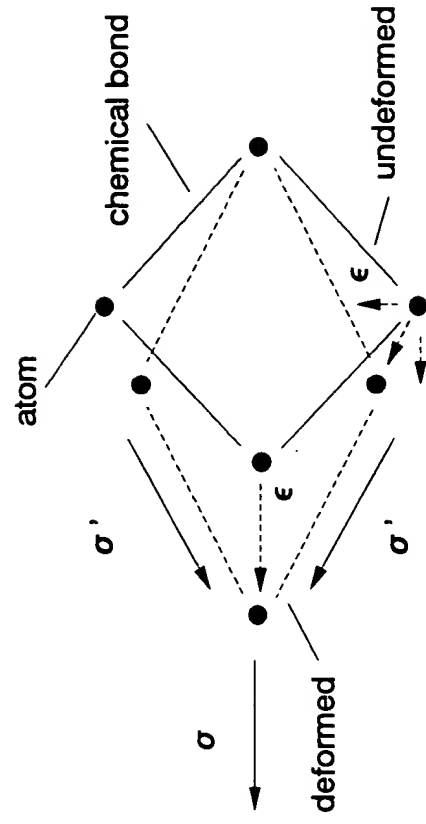


## Solid Molecular Model



**Fig. 1.1 - Prior Art**

## Ultimate Strain Energy

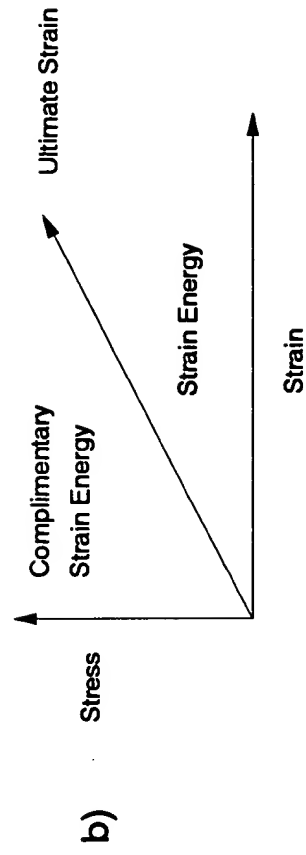
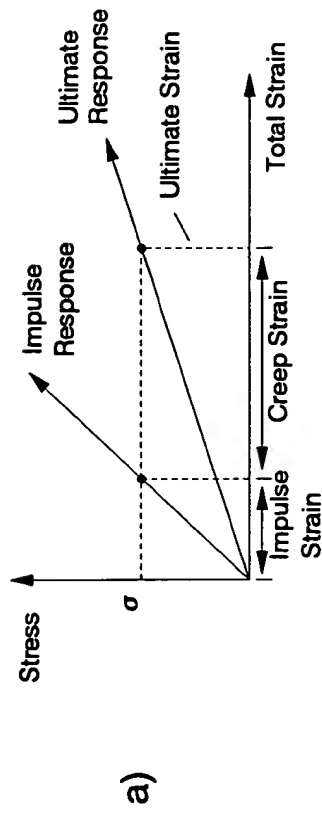


Fig. 1.2 - Prior Art

## Ultimate Elastic and Inelastic Strain

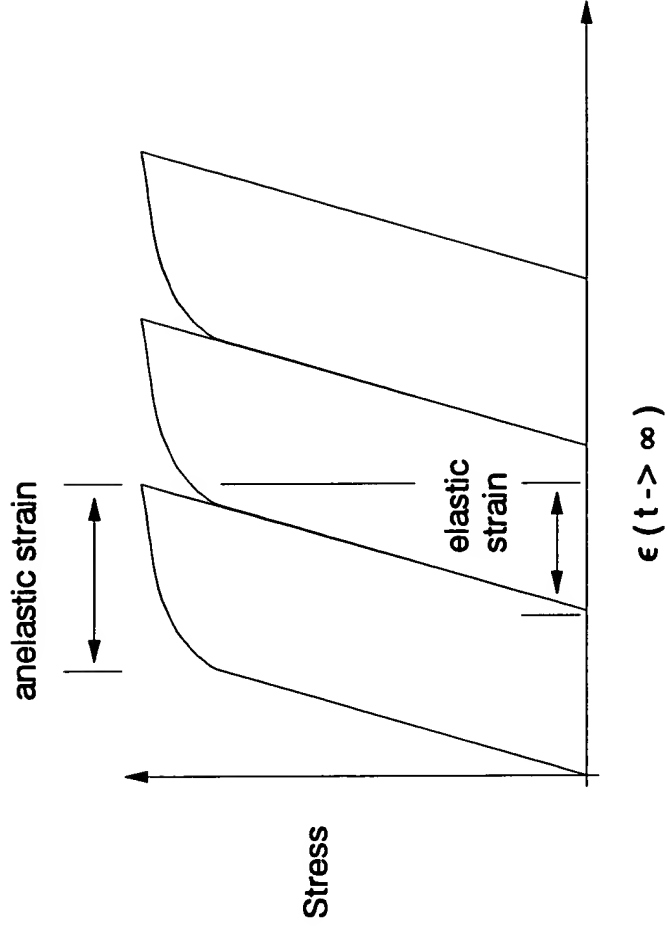


Fig. 1.3 - Prior Art

# Single Axis Inversion

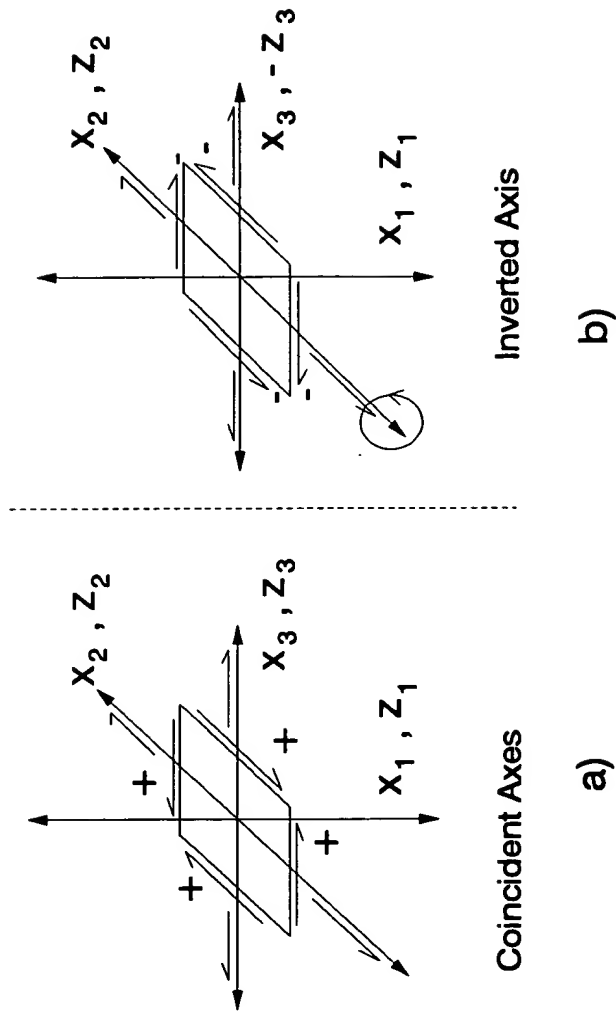


Fig. 1.4 - Prior Art



# Stress Increments

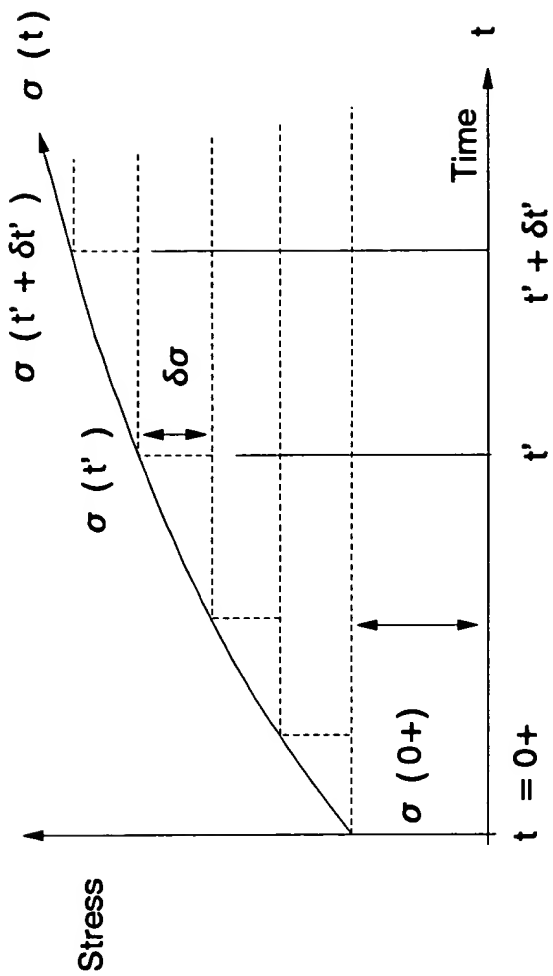


Fig. 1.6 - Prior Art

## Elastic Stress vs Strain

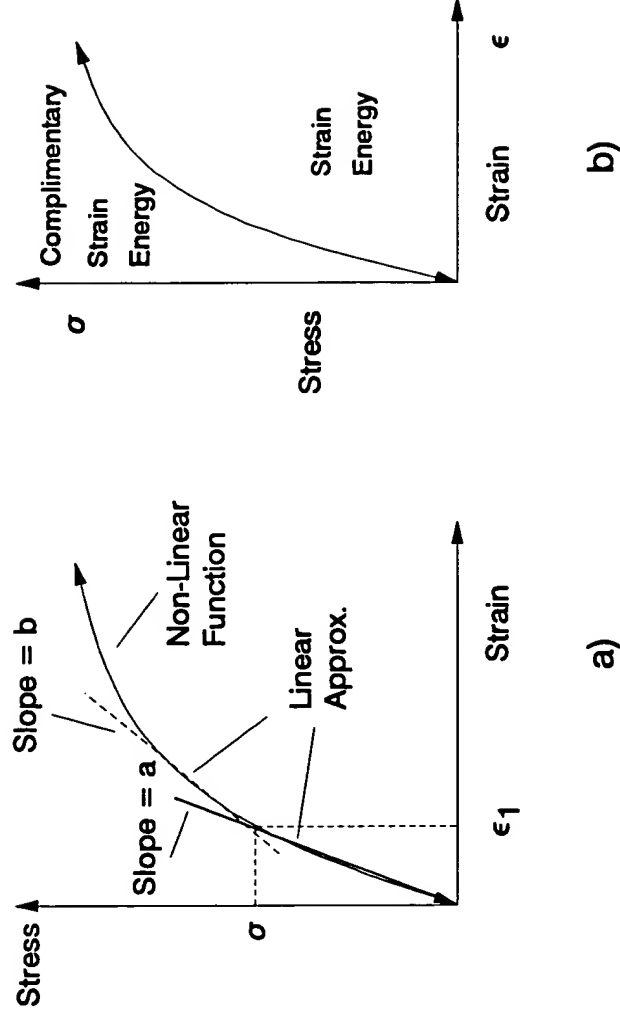


Fig. 2.1 - Prior Art

# Stress Vectors and Resultants

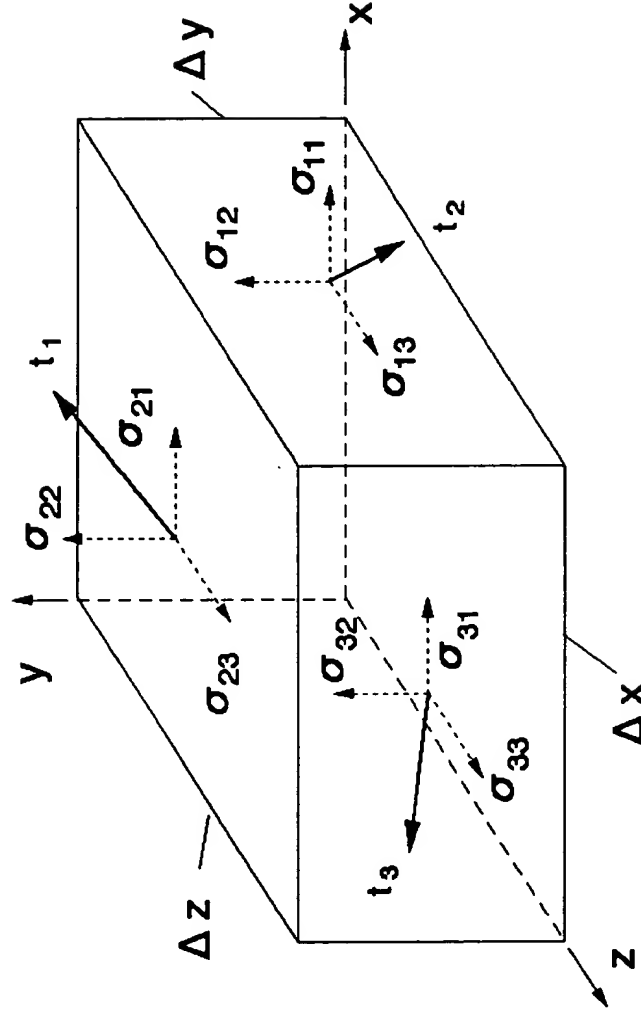


Fig. 2.2 - Prior Art



## Stress State at a Point

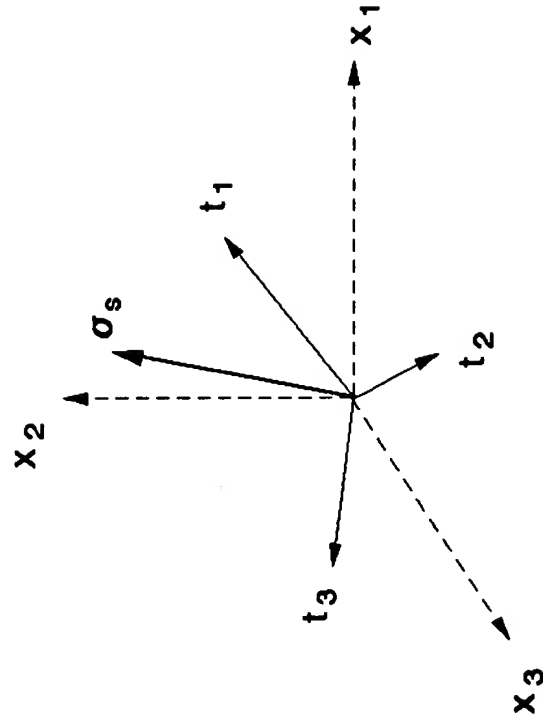


Fig. 2.3 - Prior Art

## Stress State and Reference Frames

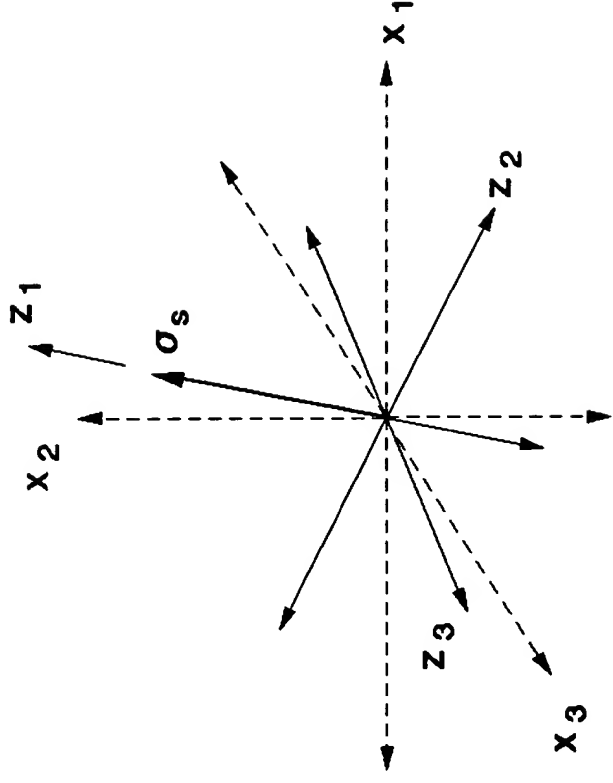


Fig. 2.4 - Prior Art

## Stress Vectors & Reference Frames

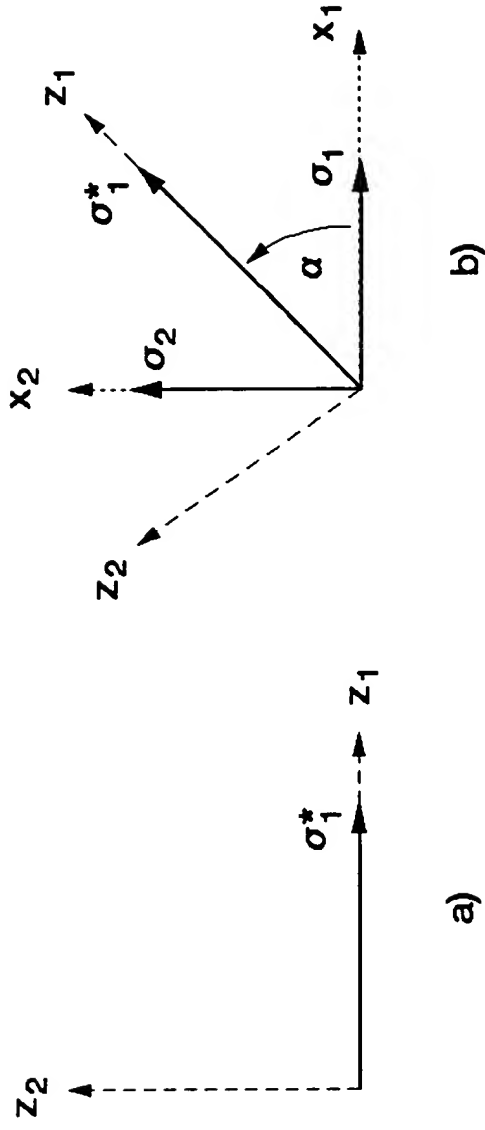


Fig. 2.5 - Prior Art

## Strain Vectors

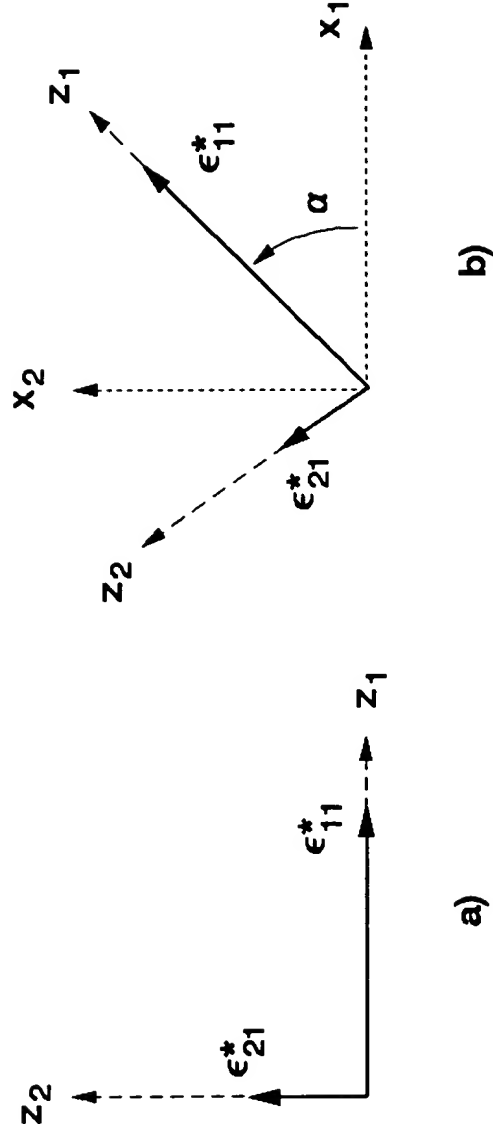


Fig. 2.6 - Prior Art

## Stress and Reference Frame of State

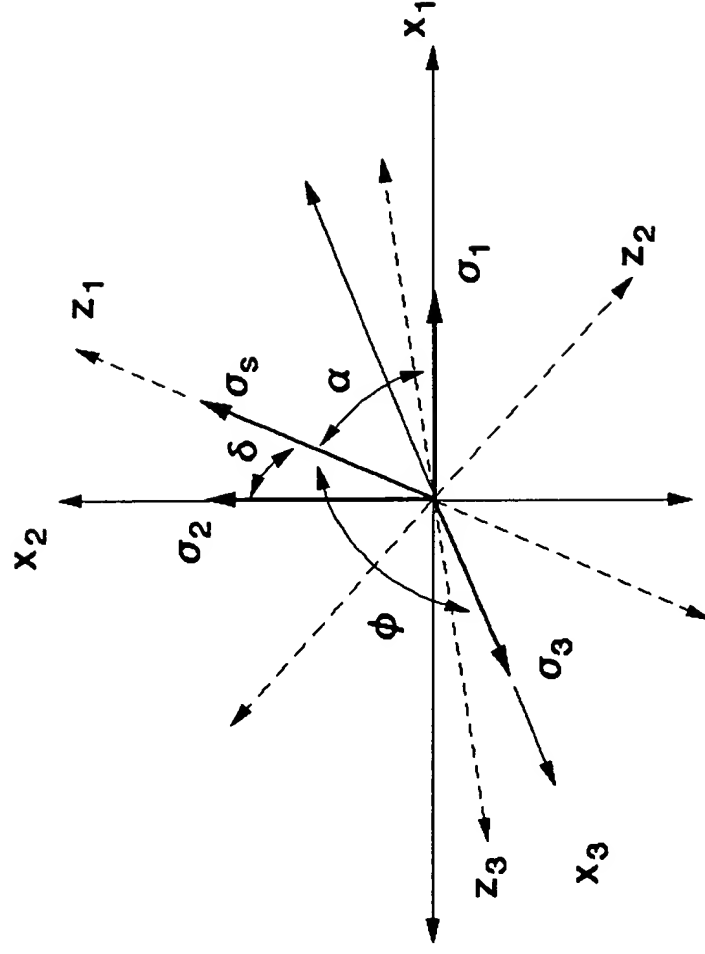


Fig. 2.7 - Prior Art

## Stress and Strain Components

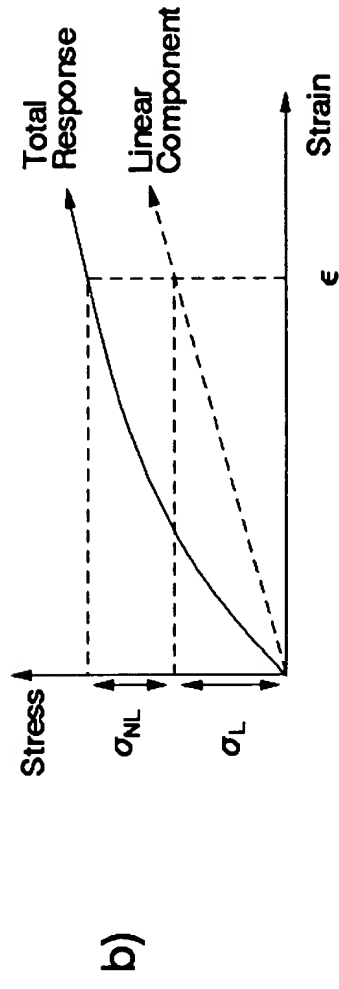
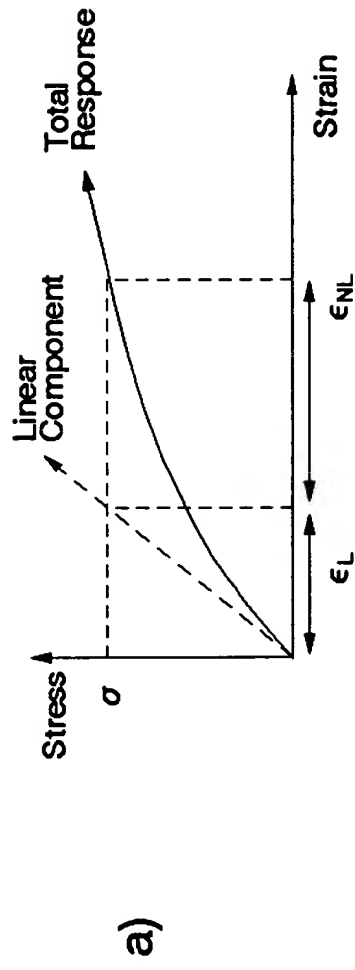


Fig. 2.8 - Prior Art

## Impulse and Ultimate Strains

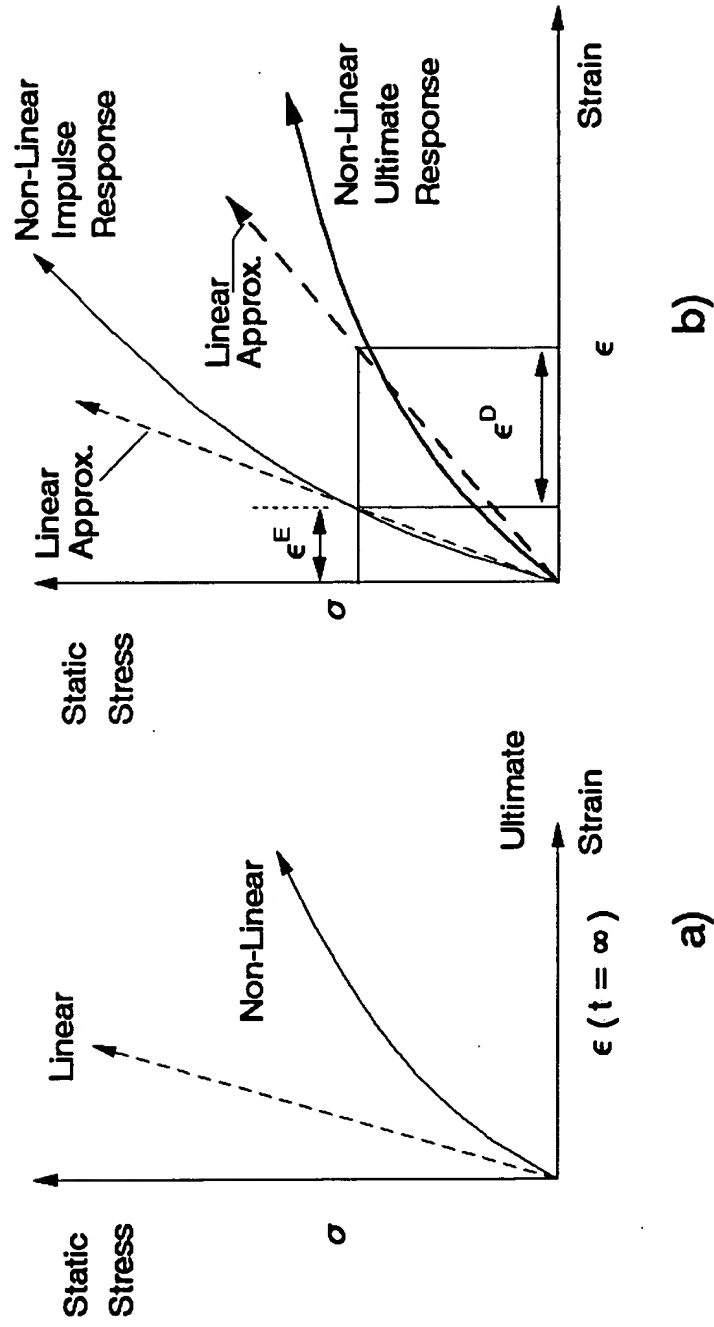


Fig. 3.1 - Prior Art

## Impulse and Ultimate Strains

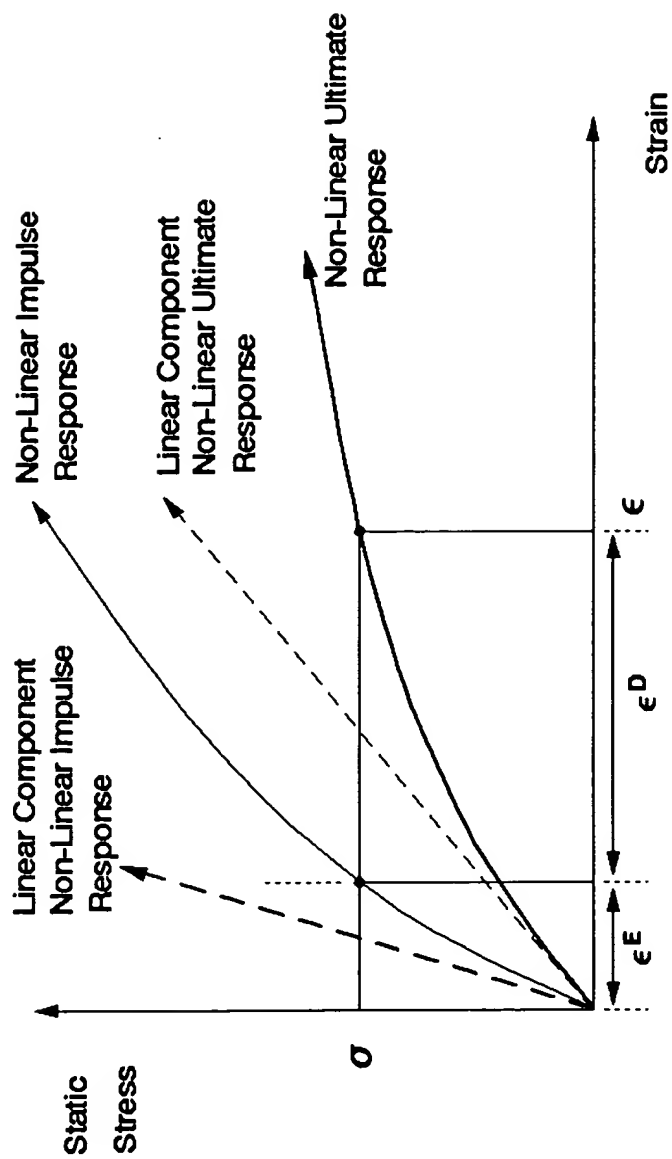


Fig. 3.2



## Stress & Strain vs. Time

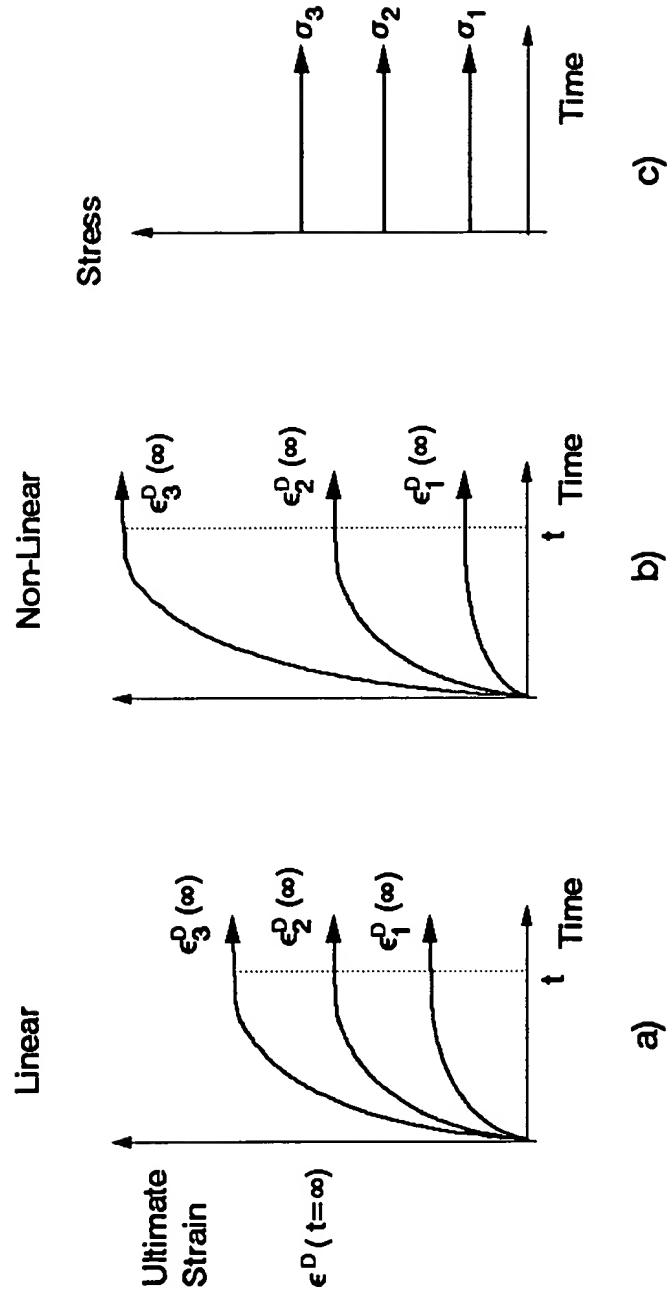


Fig. 3.3 - Prior Art

# Cubic Crystals Lead Sulfide and Sodium Chloride

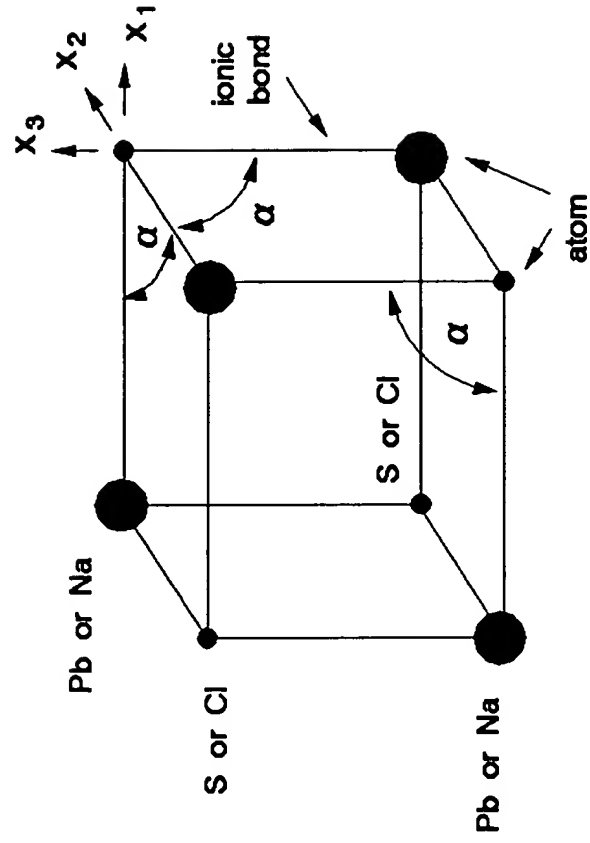


Fig. 4.1 - Prior Art

# Orthogonal Lattice Structures

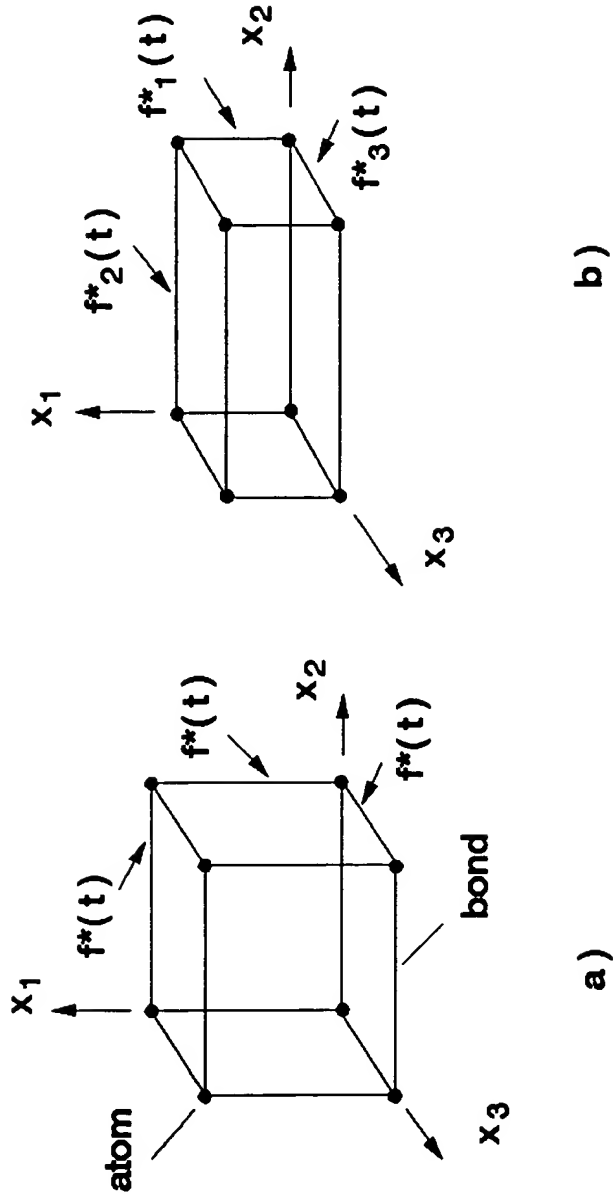


Fig. 4.2

'S' and 'P' Electron Orbits

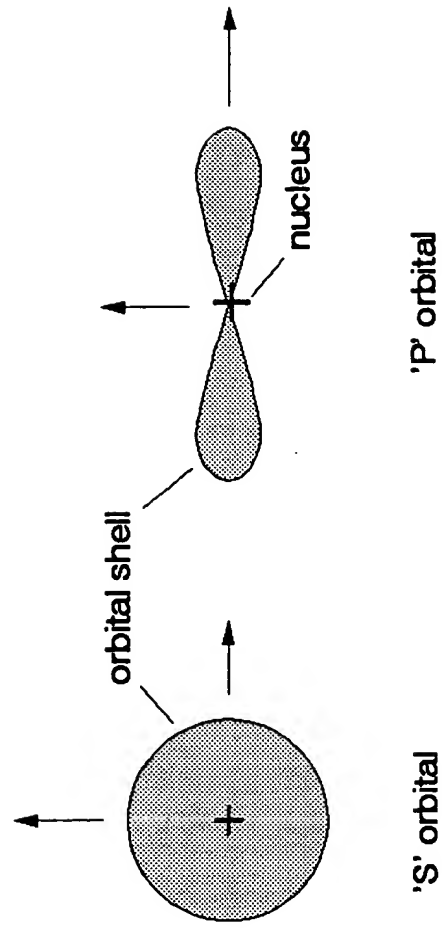


Fig. 4.3 - Prior Art

# Bonding and Anti - Bonding 'S' Orbitals

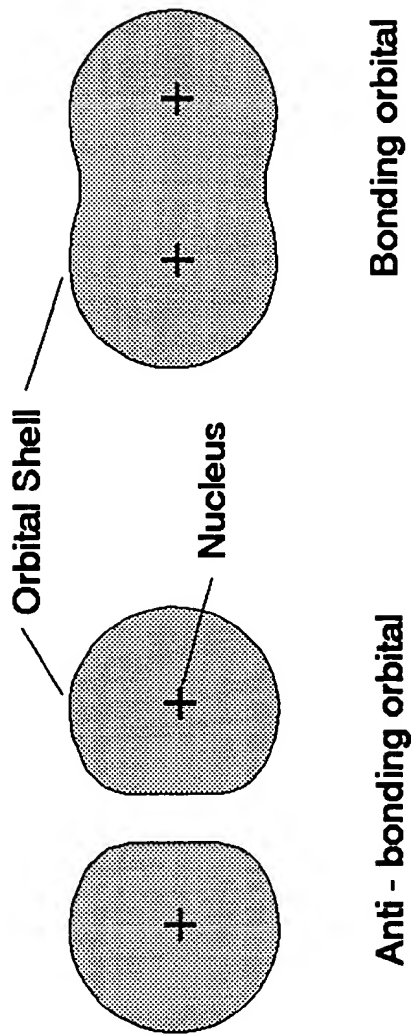


Fig. 4.4. - Prior Art

# Bonding and Anti-bonding 'P' Orbitals

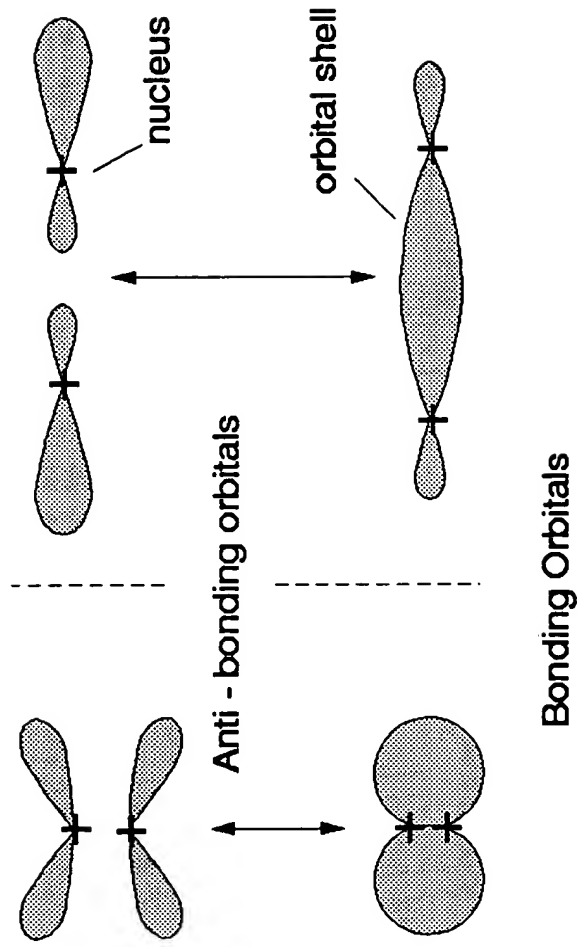


Fig. 4.5 - Prior Art

# Lattice Stresses and Deformations

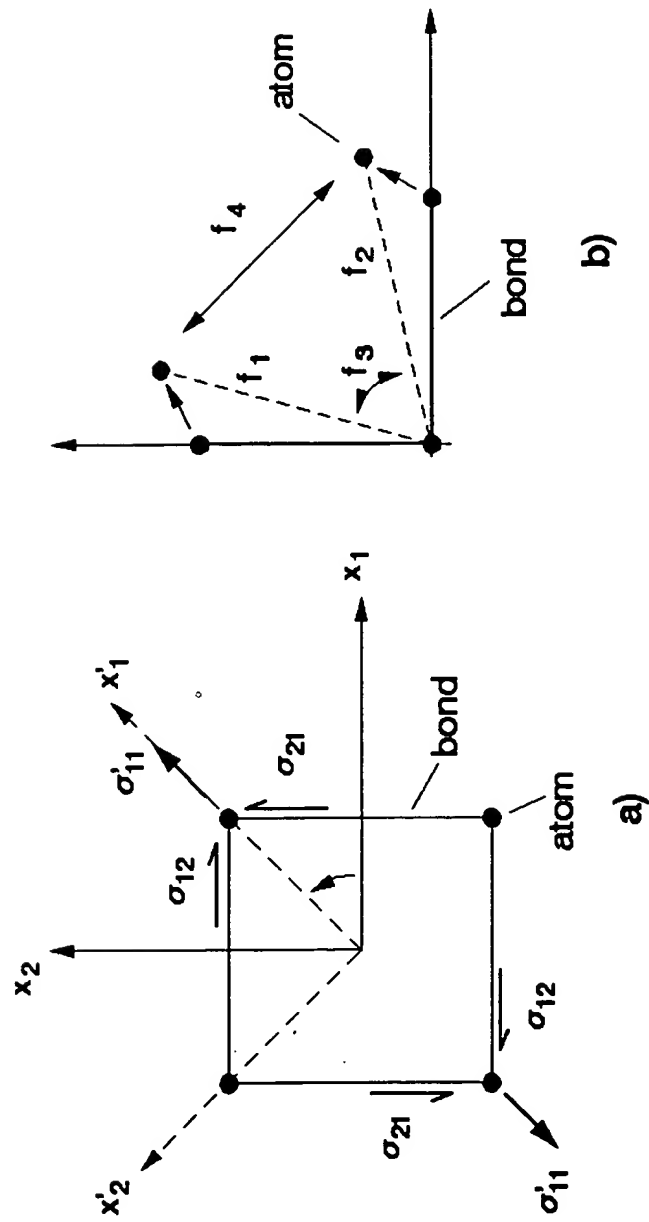


Fig. 4.6

# Lattice Deformation

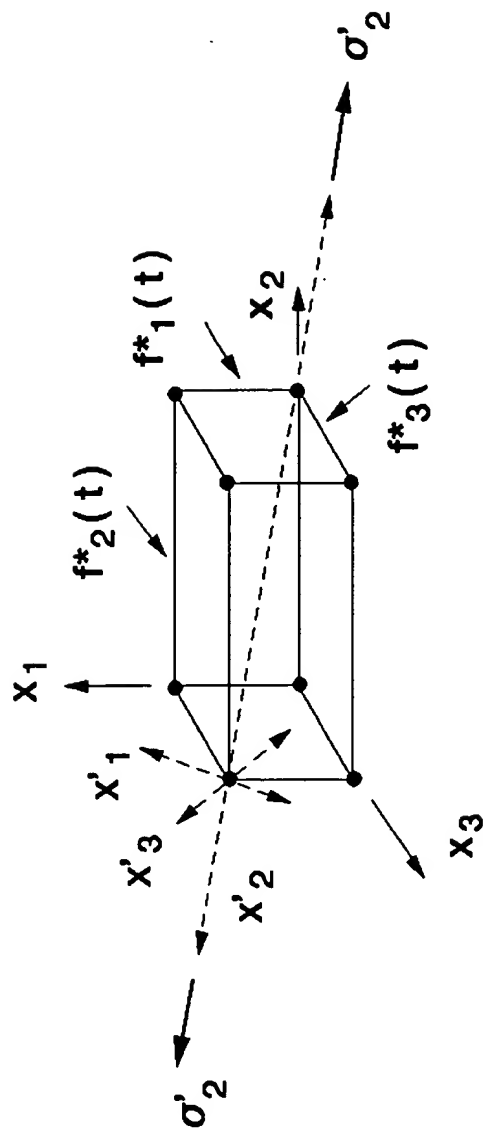


Fig. 4.7



# Partial Orthogonality

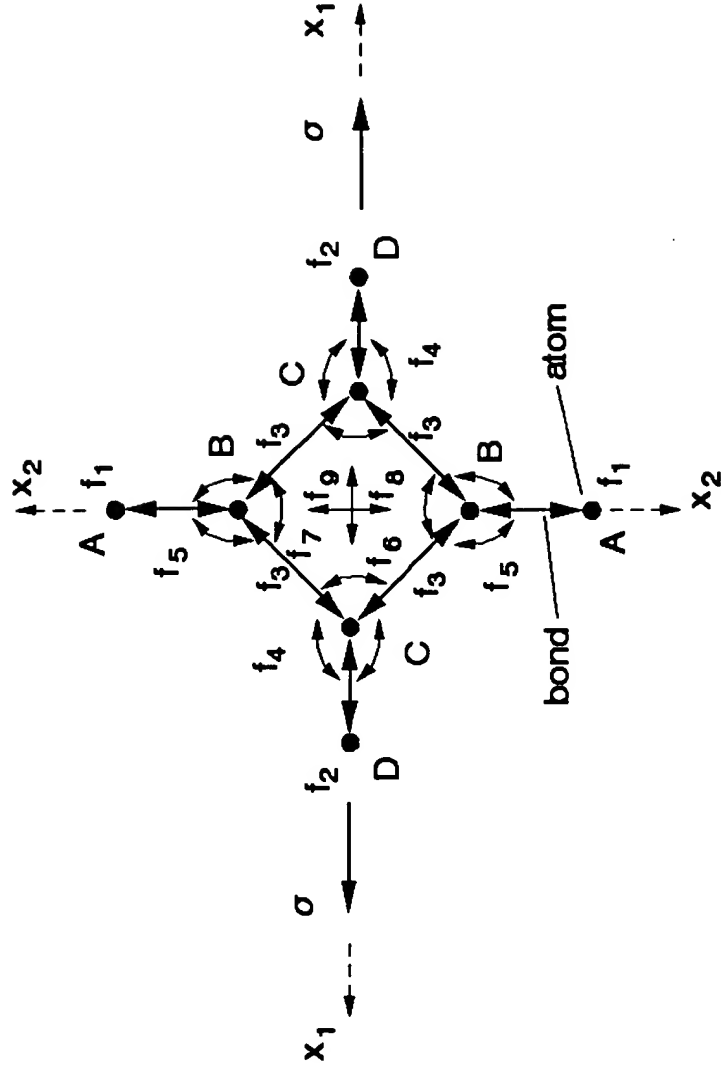


Fig. 4.8

## Face Centered Cubic Bonding

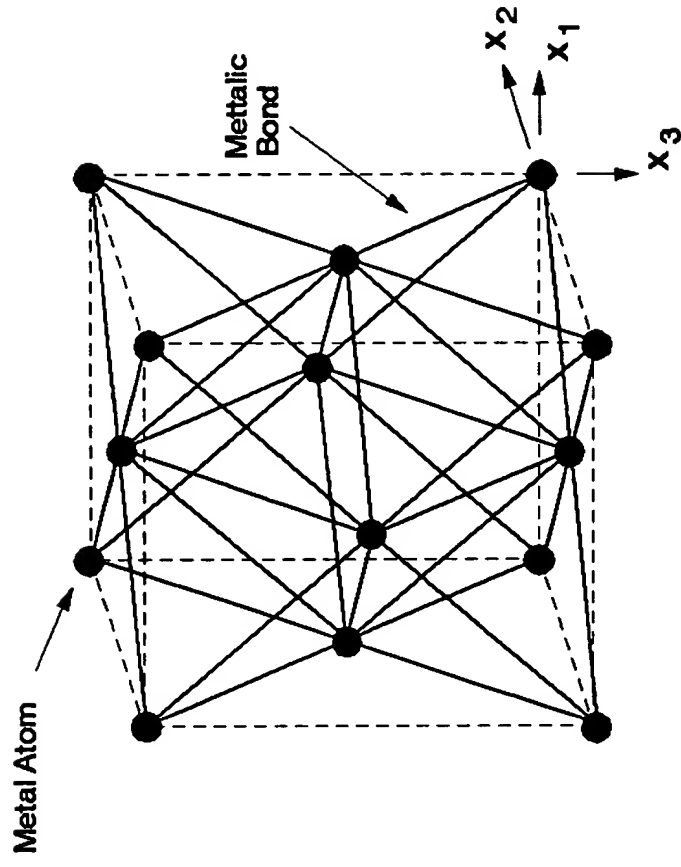


Fig. 4.9 - Prior Art

# Sheet Structures Graphite

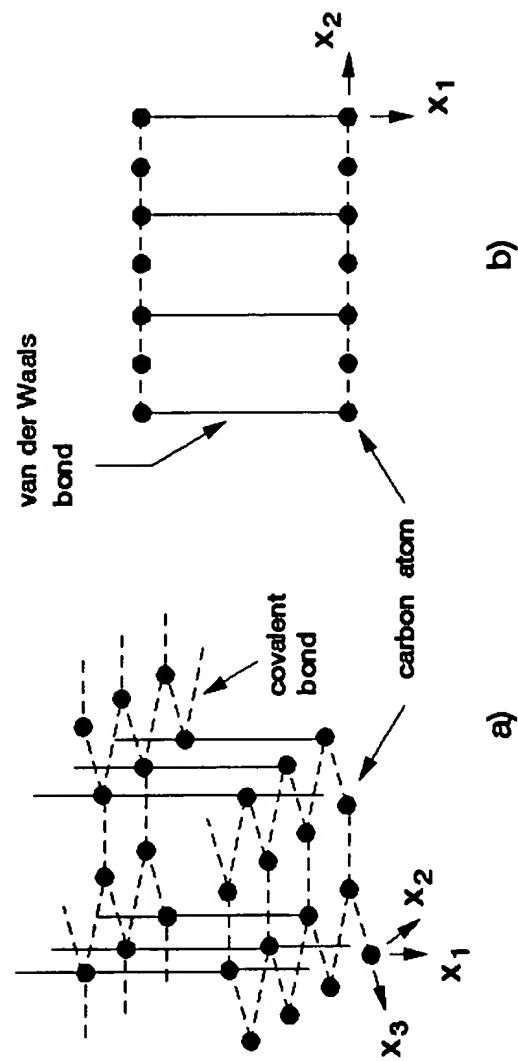


Fig. 4.10 - Prior Art

## The Benzene Ring

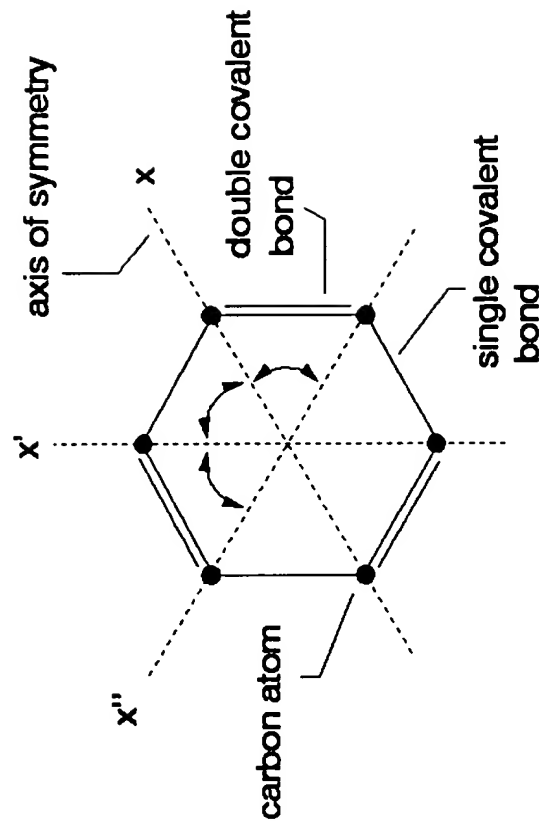


Fig. 4.11 - Prior Art

## Crystalline Metallic Iron

### Body Centered Cubic Lattice Structure

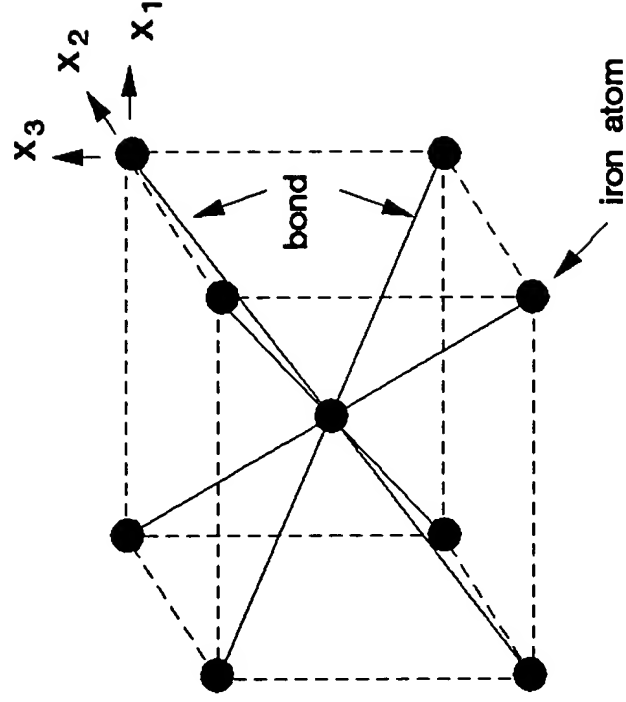


Fig. 4.12 - Prior Art

## The 90 Degree Weave

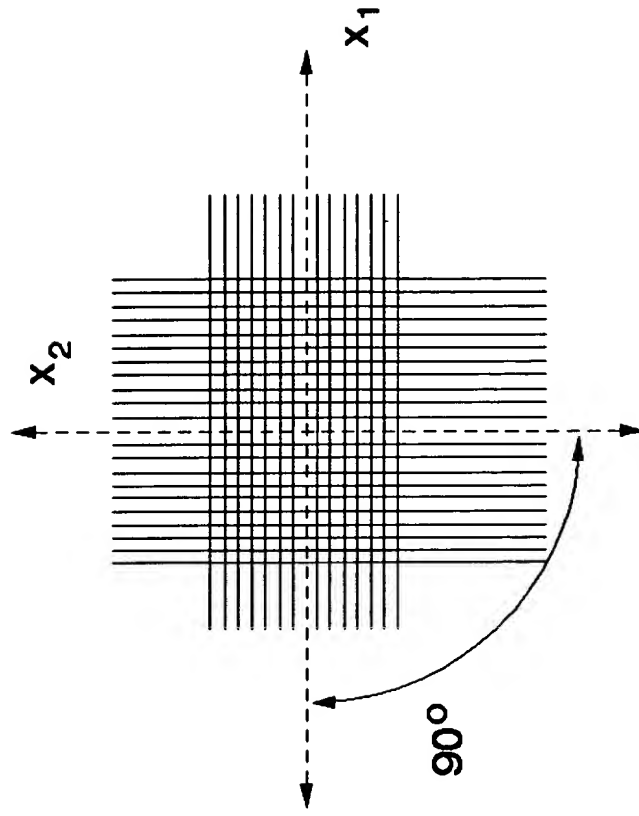


Fig. 4.13 - Prior Art

## 'Simple ' Fluid Constitutive Responses

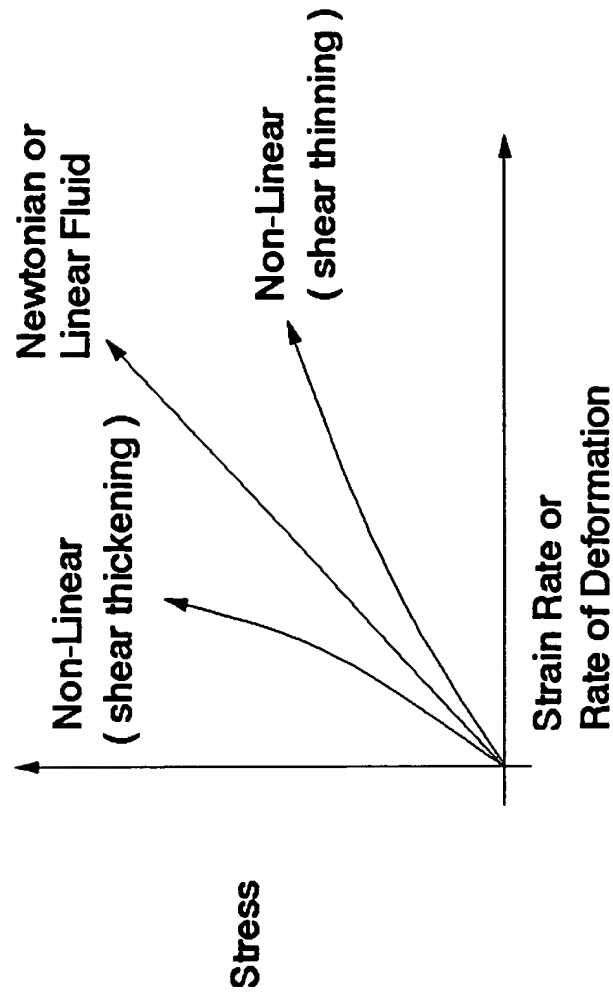


Fig. 5.1 - Prior Art

## Viscous and Pressure Forces

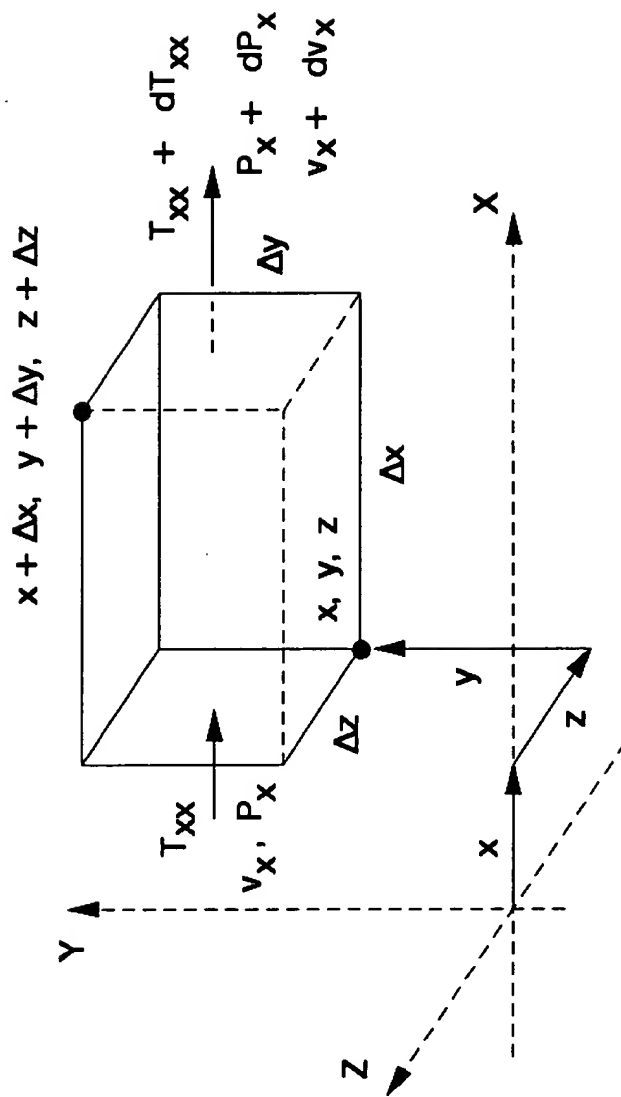


Fig. 5.2 - Prior Art



## Static Equilibrium and Steady State Flow

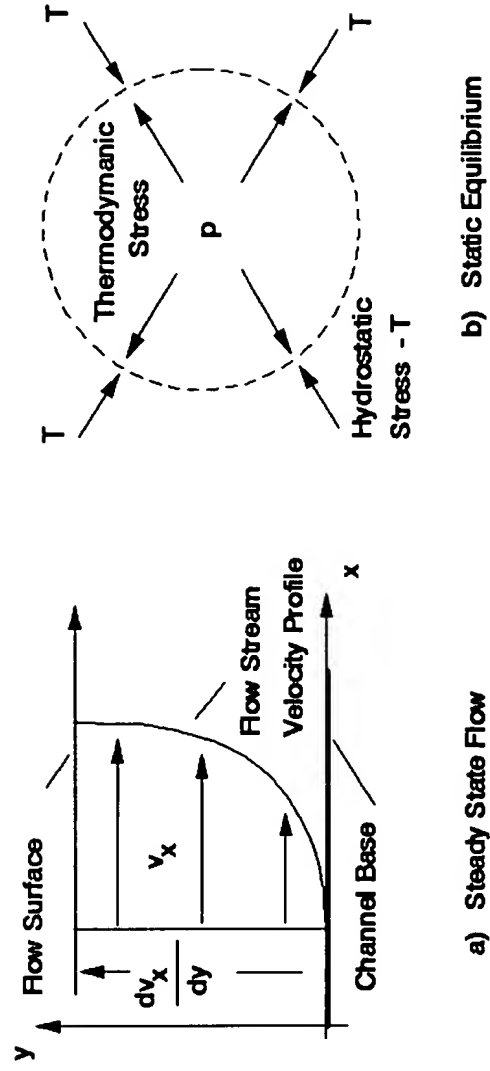


Fig. 5.3 - Prior Art

# Creep Response

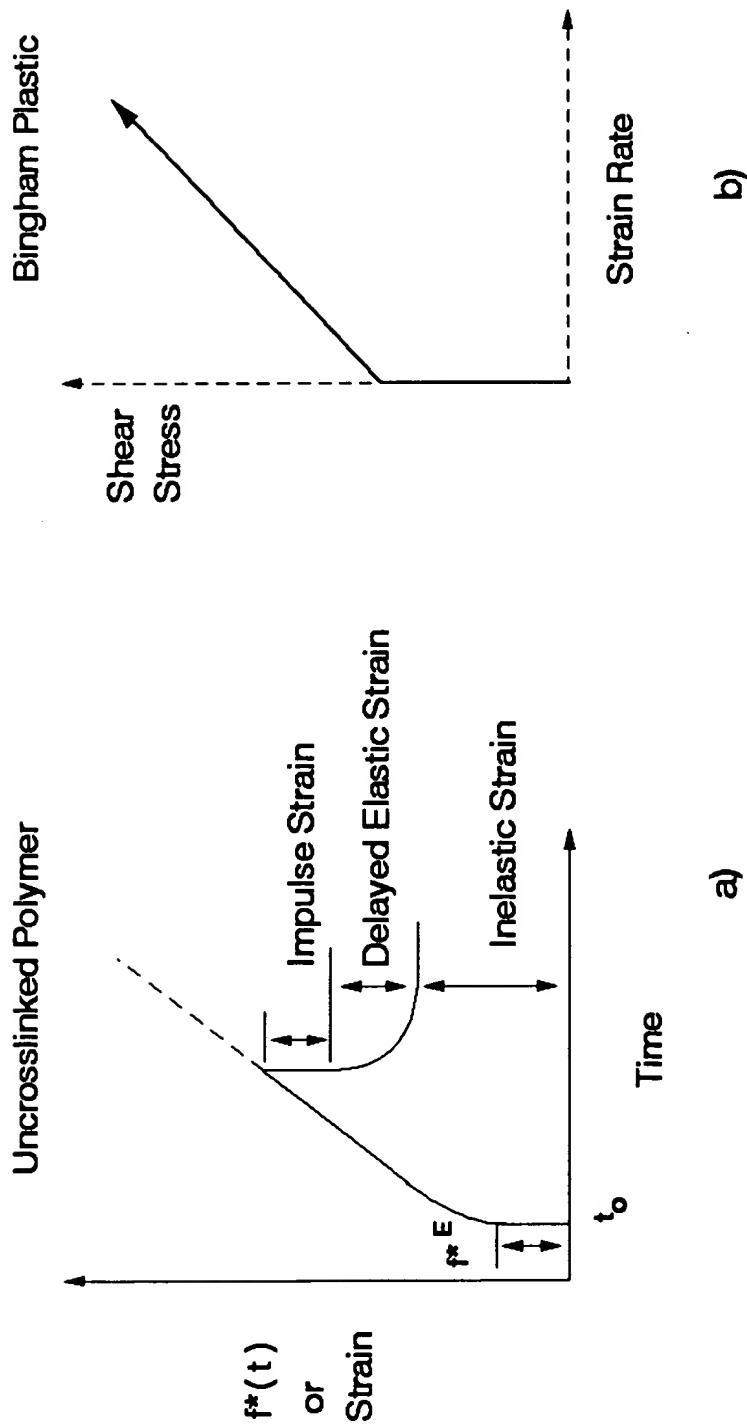


Fig. 5.4 - Prior Art

## Beam Forces and Moments

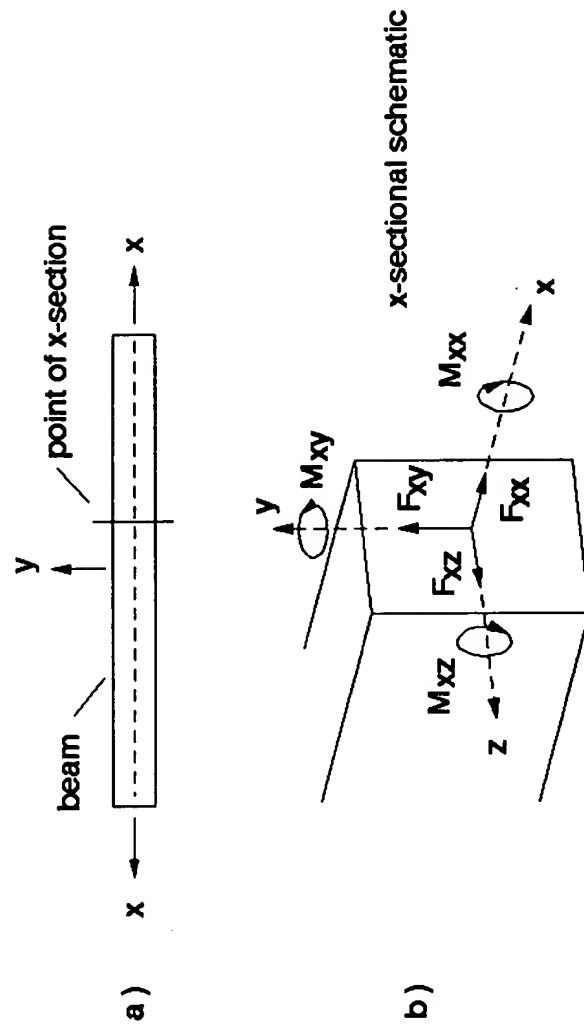


Fig. 6.1 - Prior Art

Diagram of Isolated Beam Element

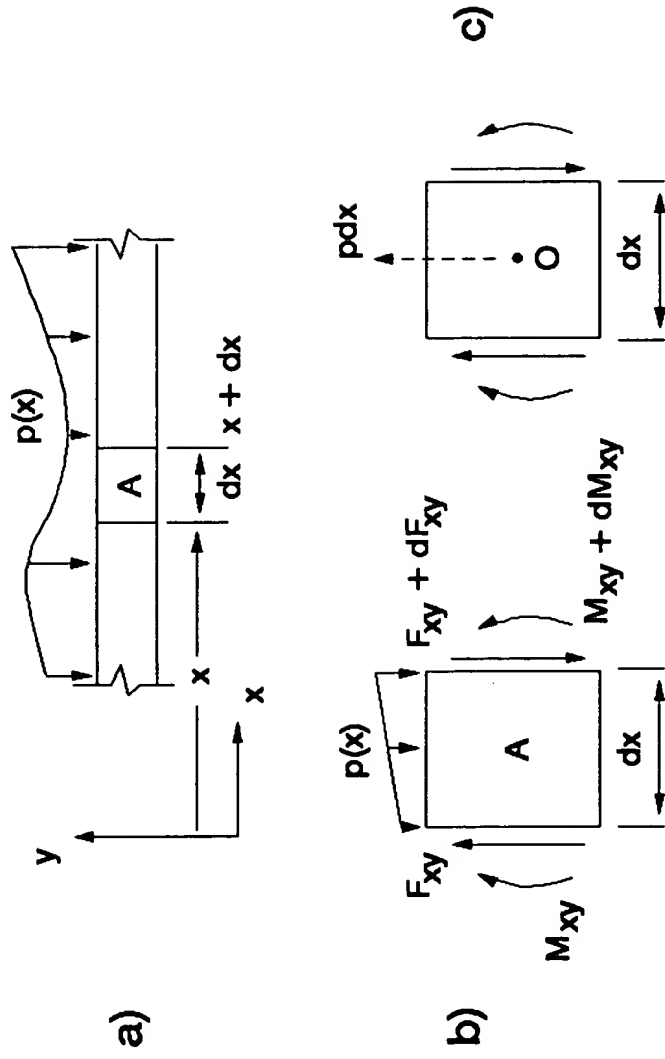


Fig. 6.2 - Prior Art

# Beam Curvature

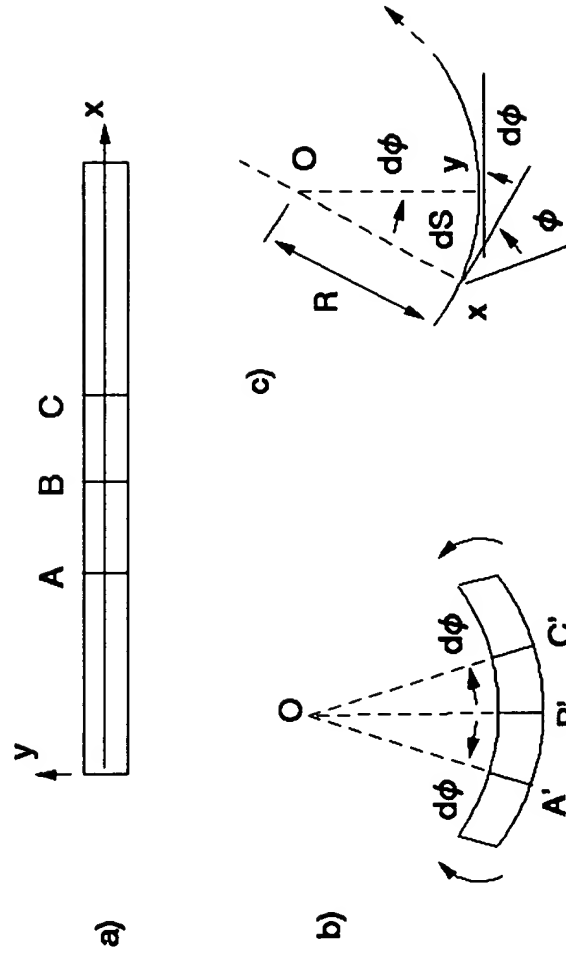


Fig. 6.3 - Prior Art

## Curvature and Line Deformation

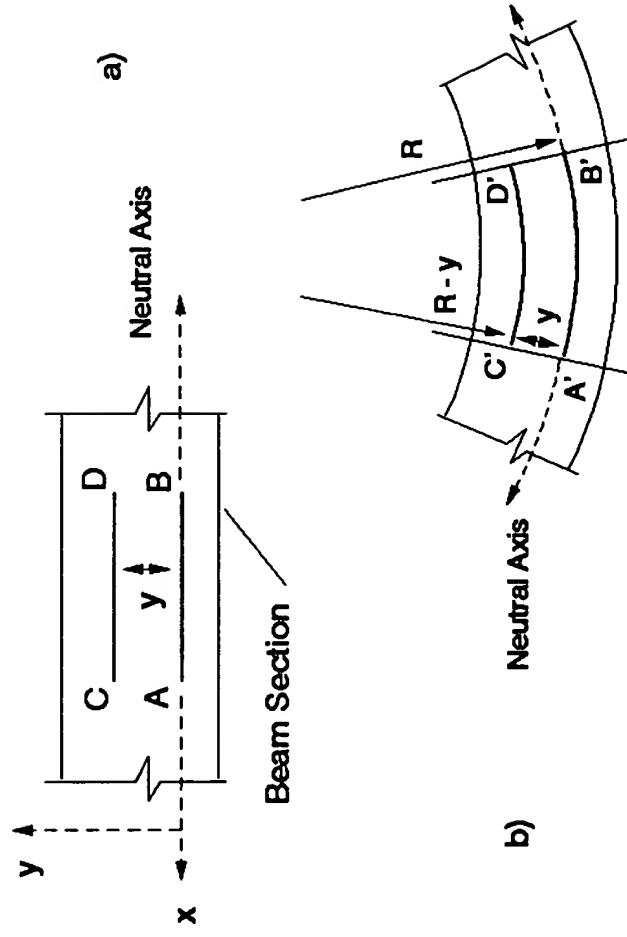


Fig. 6.4 - Prior Art

# Beam Forces and Moments

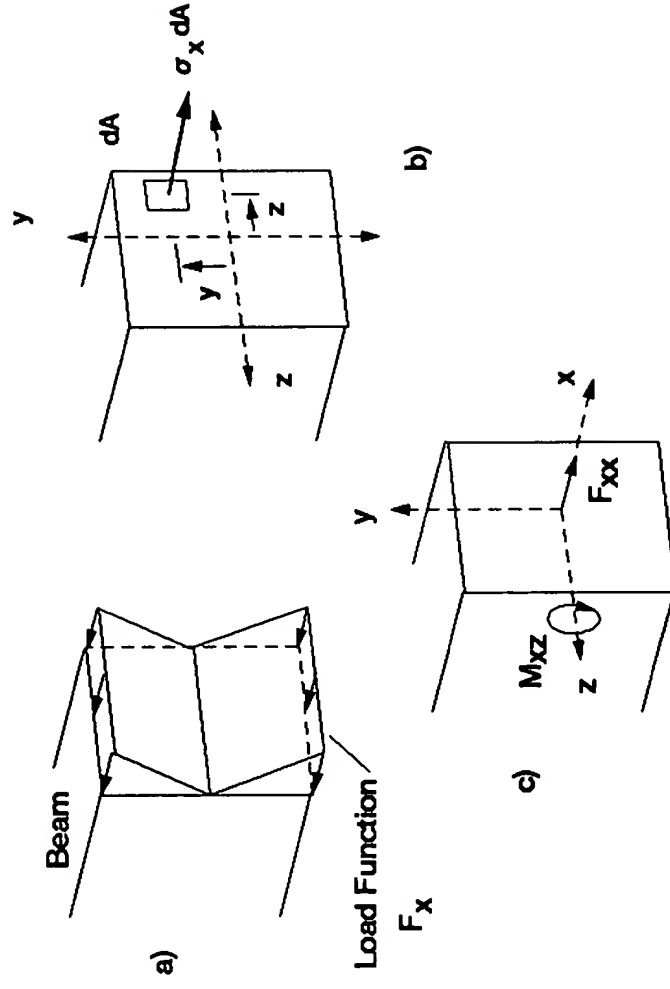


Fig. 6.5 - Prior Art

## Neutral Axis Geometry

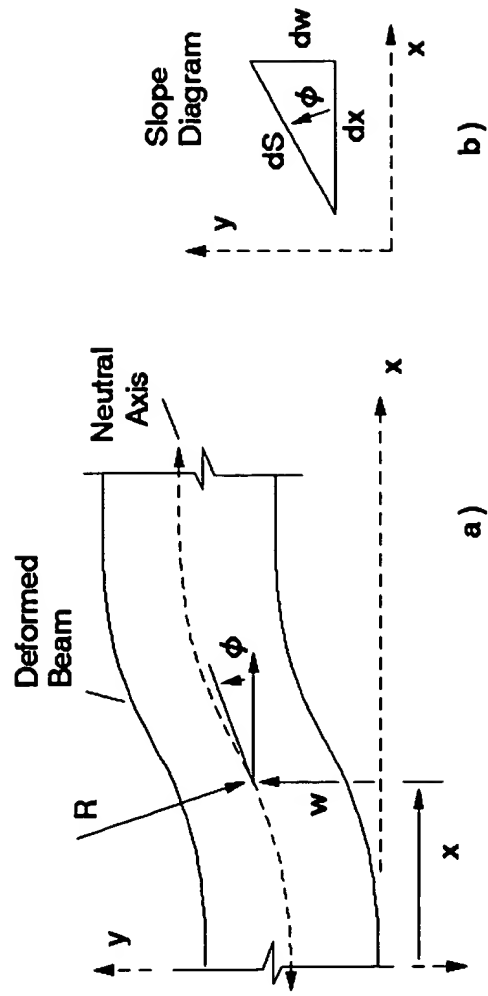


Fig. 6.6 - Prior Art





## The 90 Degree Weave

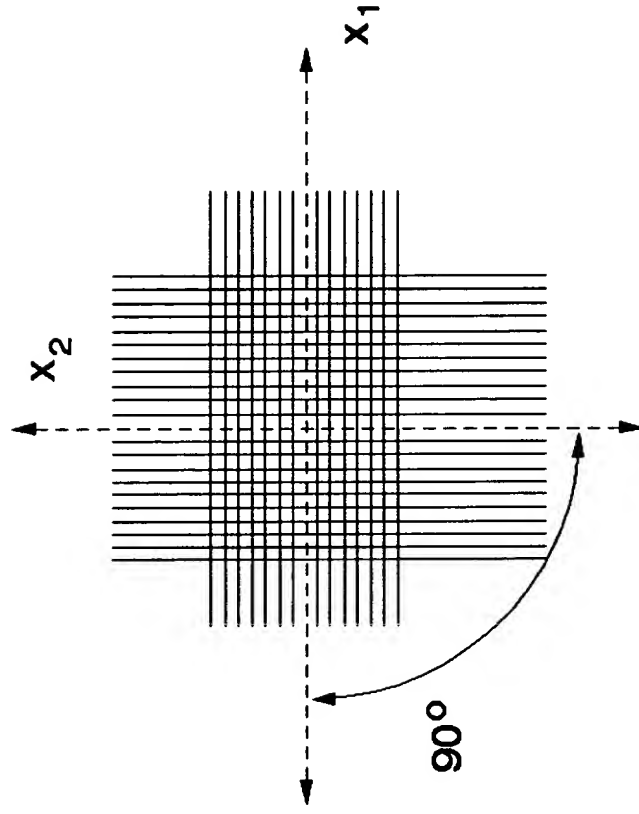


Fig. 6.8 - Prior Art

## Stress & Strain vs Time

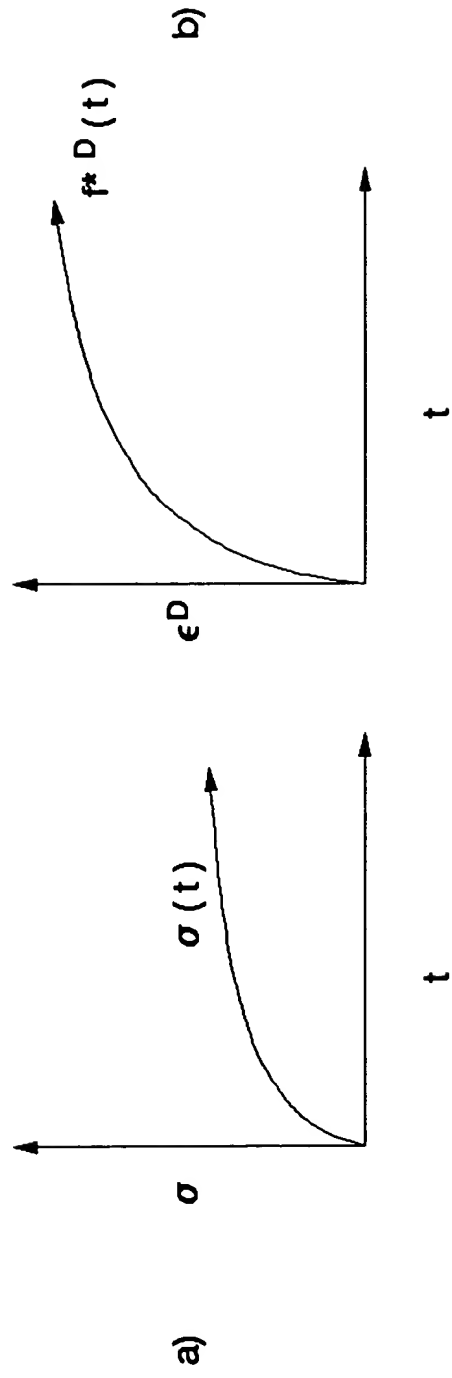


Fig. 8.1 - Prior Art

## Stress & Strain vs Time

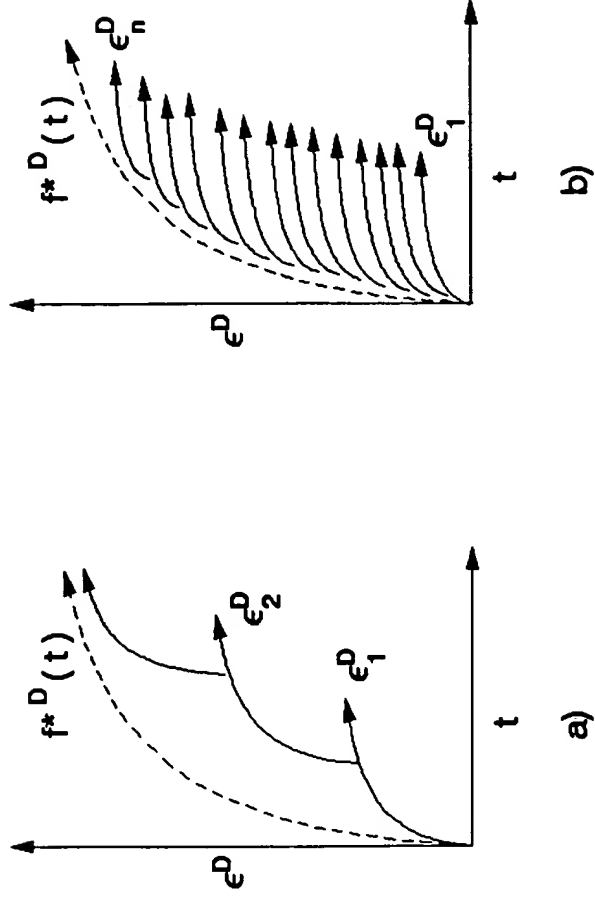


Fig. 8.2 - Prior Art

## Stress & Strain vs Time

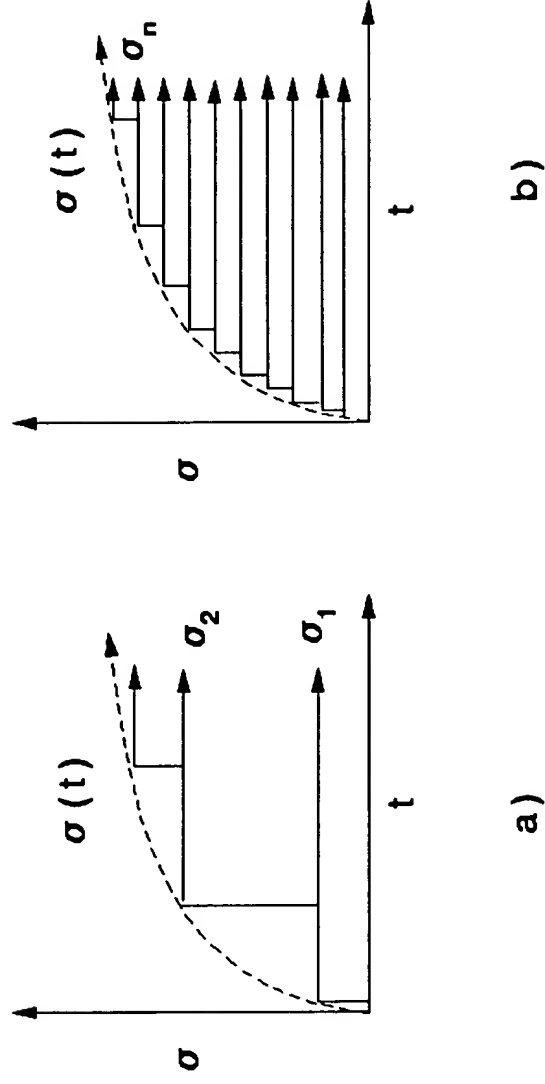


Fig. 8.3 - Prior Art

# Strain Components

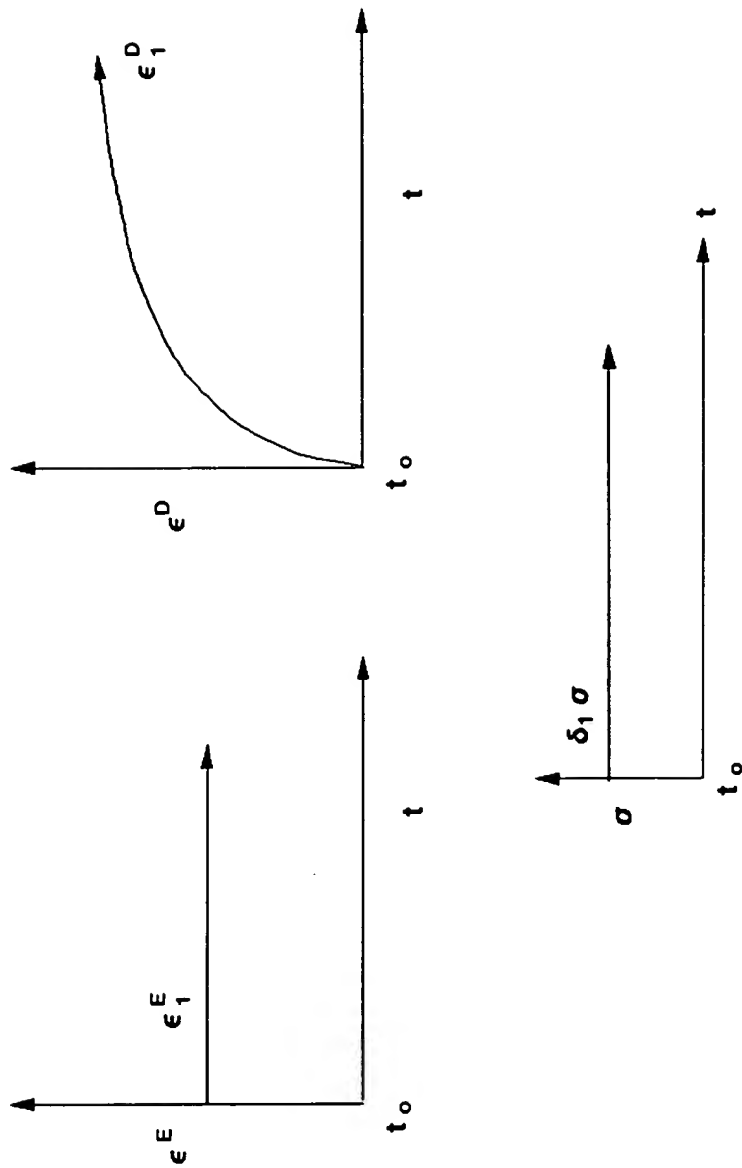


Fig. 8.4 - Prior Art

## Strain Components

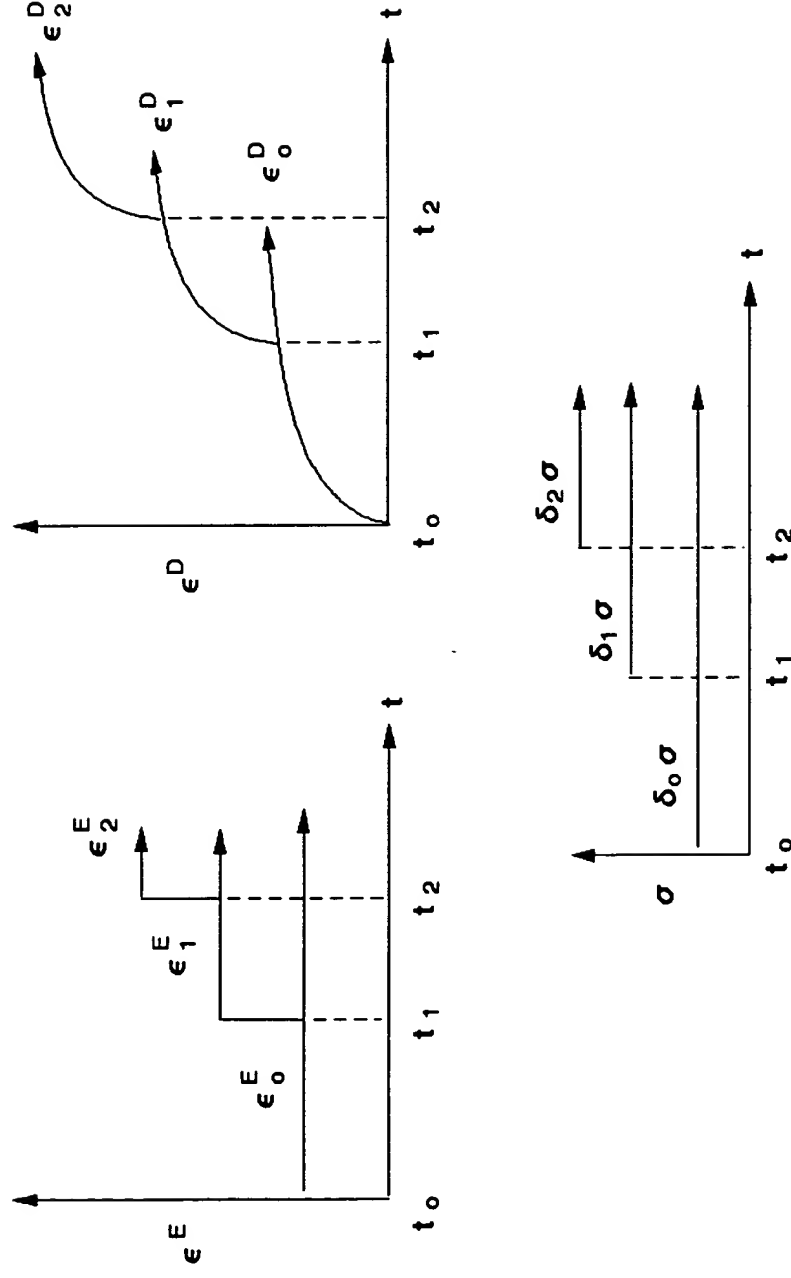


Fig. 8.5 - Prior Art